

Feasibility of Using Automatic Speech Recognition (ASR) Software for Treatment in Patients with Apraxia of Speech and Aphasia

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Individuals with neurogenic speech disorders require ongoing therapeutic support to achieve functional communication goals. Access to services may be limited for some due to increasing numbers of individuals requiring services, cost, and proximity to and availability of trained clinicians. Alternative methods for service delivery, such as computer/tablet speech therapy applications, may help bridge the gap and bring therapeutic interventions to the patient in an engaging way.

Using a within-participant, multiple baseline experimental design, we assessed the feasibility and efficiency of using a newly created speech therapy application. This application is unique to those currently commercially available because of its use of automatic speech recognition (ASR) software. Five participants with apraxia of speech and aphasia secondary to left CVA were recruited to complete this pilot study. Currently, participants have either finished all phases of the study (n=2), completed the therapy phase and waiting for follow-up (n=1), or completing the therapy phase (n=2). Data were collected to assess: 1) the degree of adherence to an intensive treatment schedule, 2) the efficacy of using an independent training paradigm, 3) the feasibility of using Automatic Speech Recognition (ASR) software for people with SD, and 4) the level of engagement of participants with the application.